16. Position the Primary Load Washer (T2LLM312) on top of the Soft Foam Compression Element, as shown in **Figure 3.17**.

Figure 3.17 - Primary Load Washer

17. Pass the threaded end of the Achilles Cable assembly (T2LLM319) up through the Spring Tube Assembly from the bottom side, as shown in **Figure 3.18**.

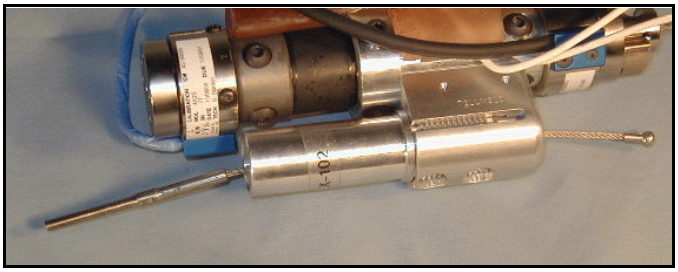

Figure 3.18 - Achilles Cable Installation

18. Secure the cable with the Achilles Retaining Nut (T2LLM318) and tighten the #4-40 x 1/8" Nylon Tipped SSS {0.05} in the retaining nut to secure the position of the nut on the cable, as shown in **Figure 3.19**. The adjustment of the Achilles cable will be discussed in Section 3.3.

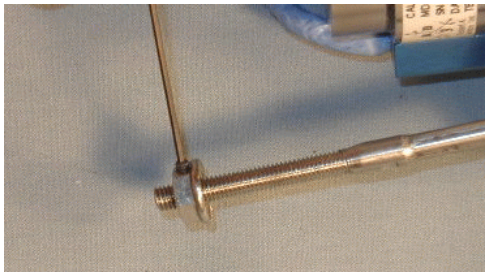

Figure 3.19 - Achilles Retaining Nut

19. The Z-axis rotation of the THOR-FLX / HIIIr is controlled at the joint between the ankle and the lower tibia load cell. This joint is designed to allow +/- 20 degrees of controlled internal / external rotational motion. The components used to control this motion are shown along with the ankle upper joint in **Figure 3.20** - the two rubber z-rotation stops (T2AKM027), and Wedge #1 (T2LLM111).

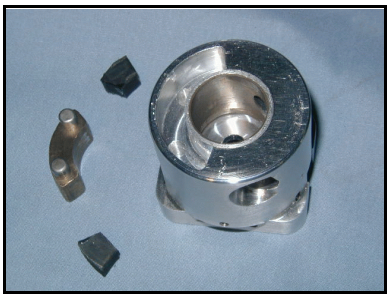

Figure 3.20 - Components

20. The Z-rotation stops are installed in the top of the Ankle Upper Joint Base (T2AKM011) on either side of the annular groove - as shown in **Figure 3.21.** The Wedge #1 is shown in the photograph for illustration purposes only. This wedge is attached to the bottom of the lower tibia load cell assembly with the two dowel pins.

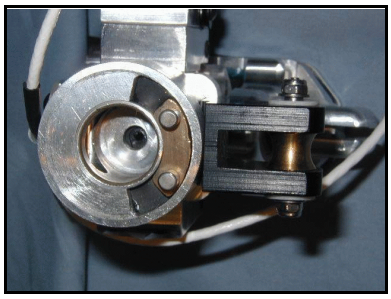

Figure 3.21 - Z-rotation Assembly

21. As an option, the Z-rotation axis can be locked for calibration purposes. To lock the axis, remove the rubber z-rotation stops and substitute Wedge #2 (T2LLM112) for Wedge #1, as shown in **Figure 3.22.**

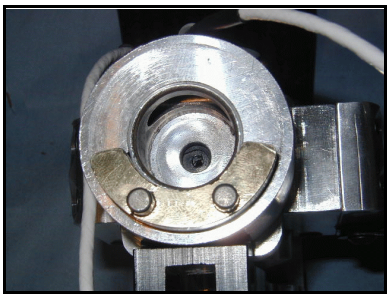

Figure 3.22 - Locked

22 . Secure the desired Wedge onto the bottom of the lower tibia load cell using the dowel pins, as shown in the left photo of **Figure 3.23**. Slide the mounting post of the lower tibia load cell into the counter bored hole in the Upper Joint Base (T2AKM011) of the Mechanical Ankle Assembly (T2AKM000). Align the D-shaped hole in the Z-axis potentiometer (located within the Upper Joint Base) with the flat on the end of the tibia Rotary Potentiometer Shaft (T2AKM021). Center the z-rotation wedge between the soft stops (if required) and slide the assemblies together as shown in **Figure 3.23.**

WARNING: THE D-SHAPED HOLE IN THE POTENTIOMETER MUST BE ALIGNED WITH THE FLAT ON THE POTENTIOMETER SHAFT OR THE POTENTIOMETER WILL BE PERMANENTLY DAMAGED.

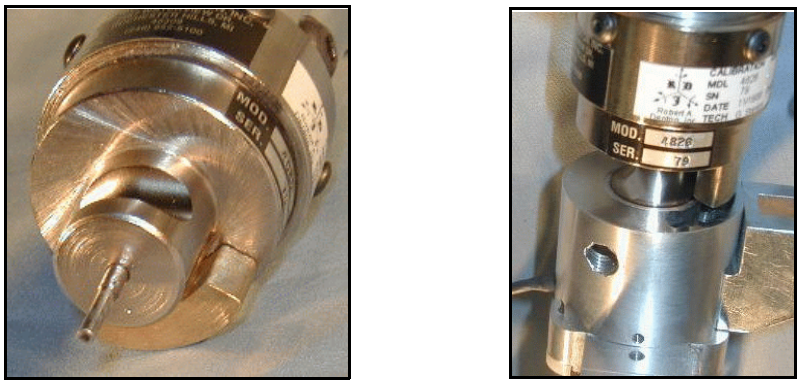

Figure 3.23 - Attachment of the Wedge to the Base of the Lower Tibia Load Cell and Installation of the ankle components

23.Secure the ankle assembly to the lower leg assembly using the Ankle Retaining Bolt (T2AKM029) {3/16} as shown in **Figure 3.24**.

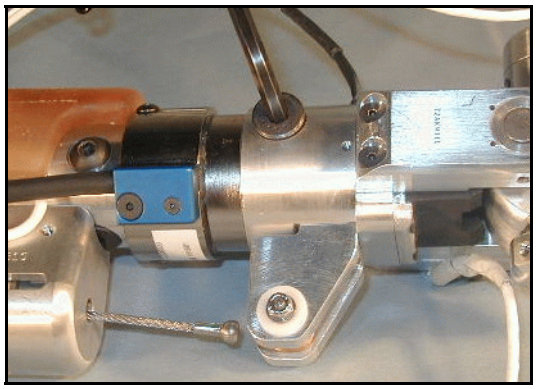

Figure 3.24 - Attaching Ankle Assembly to Lower Leg